REMARKS

Re-examination and reconsideration of the rejections are hereby requested.

The present invention is a system for fulfilling an information need using extended matching techniques. According to the present invention in one aspect the method includes receiving a query comprised of one or more fully specified terms and one or more at least partially unspecified terms. The system determines one or more matches for the query wherein a criterion for determining one of the matches specifies that a relative order of at least one term of the query need not be preserved with respect to at least one other term included in the query. As discussed in the specification on page 34, in prior disclosures the order of terms in a match must exactly correspond with the order of terms in the partially unspecified query. For example, if one were trying to find out where the author Agatha Christie was born one might use a partially unspecified query:

Agatha Christie was born _ [LOCATION]

This query would be matched by the string "Agatha Christie was born in England" but would not match the string "England is where Agatha Christie was born."

The present invention would allow this latter string to form a match. According to the invention there are no requirements that the terms in the searched document that matched the terms in the query have any particular order. There may also be intervening words separating the terms that match the partially unspecified terms and those that match the fully specified terms.

Claim 1 stands rejected under 35 U.S.C. § 102(e) as being anticipated by Smith, U.S. patent number 6,081,804. Smith is directed to a computer system and method for performing rapid and multi-dimensional word searches. It is not directed to a system for fulfilling an information need as is the present application. Rather, Smith is a traditional search engine for finding the occurrence of words in a searched data base. Specifically, Smith does not teach receiving a query composed of one or more fully specified terms and one or more at least partially unspecified terms. The Examiner has pointed to Smith at column 5, lines 52 to 67 for such a teaching. Here, Smith merely uses the well known wild card

operator. For example, cat * would return the words cat, catch, or catastrophe. However, there is no fully specified term in that example. As to relative order, Smith merely teaches that order can be prescribed such that if a user wants to search a space for objects where the word "cat" precedes the word "hat" he can enter the appropriate search query. This teaching in Smith does not anticipate the claim language.

The examiner indicates that he disagrees with this argument and quotes from Smith at column 3 lines 3-6. It is not understood what the relevance of this quoted portion is. The examiner also refers to column 5 beginning at line 1. It is emphasized that claim 1 recites receiving a query comprised one or more fully specified terms and one or more at least partially unspecified terms. It is submitted that Smith does not meet such limitations.

Currently pending claim 2 adds the step of identifying documents in an index that contain one or more at least partially unspecified terms with the index including pre-analyzed contexts of terms appearing within a plurality of documents. This claim stands rejected as anticipated by Smith with the Examiner pointing to Smith at column 6, lines 1-49. This section of Smith deals with characterizations of the location where matches can be made within the searched database. For example, "/summary" would indicate that the query words in the search must be found in the summary portion of an object in the searched space. It is not clear how the Examiner is using this teaching to reject claim 2. Reconsideration is requested. Claim 3 is directed to the present invention including identifying contexts within an index that in accordance with the query the index includes pre-analyzed contexts of terms appearing within a plurality of documents. The Examiner has cited the same location in Smith to reject this claim.

Claim 4 depends from claim 3 and specifies that the finite state machine is a finite state transducer. It is submitted that Smith does not teach a finite state transducer. The Examiner again cites Smith at column 6, lines 1-49 but the undersigned attorney can find no teaching of a finite state transducer in that portion of Smith.

Claim 5 depends from claim 3 and adds that the finite state machine allows for the appearance of fully specified and at least partially unspecified terms in any order in a potential matching context. The

undersigned can find no such teaching in Smith. Claim 6 depends from claim 3 and is allowable for the reasons discussed above in conjunction with claim 3.

Claim 16 depends from claim 3 and recites that the contexts are stored as finite state machines. The Examiner again refers to Smith column 6, lines 1-49. Clarification is requested in that the undersigned attorney can find no teaching that contexts are stored as finite state machines. Reconsideration is requested.

Claim 20 depends from claim 1 and recites the assigning of a score to a match. The Examiner cites Smith at column 2, lines 7-19. This section of Smith refers to prior art fuzzy logic searching in which each object in a database is assigned a weight and objects are retrieved according to their weight with respect to a search query. Claim 20 requires assigning a score to a match rather than a weight to an object in the searched database as set forth in Smith. Claim 21 recites that the score reflects the number of times an instance of a match is located among a plurality of documents. It is submitted that such a teaching is not present in Smith. Similar comments apply to claim 25. Reconsideration is requested. Claim 27 depends from claim 1 and is allowable for the reasons set forth above in conjunction with claim 1. Further, it is submitted that Smith does not teach a syntactic or morphological restriction. Claim 34 depends from claim 2 and recites that the index comprises locations of terms within documents. The Examiner cites Smith at column 6, lines 1-49 but the undersigned can find no such teaching in Smith. Reconsideration is requested. Similarly, claim 35 is allowable in that Smith does not teach determining the location of a term in the query within a document using the index. Claim 36 depends from claim 1 and adds ranking a plurality of the located matches or portions thereof. The Examiner cites Smith at column 2, lines 7-19 as meeting this limitation. The undersigned can find no teaching of a ranking step in Smith. Similarly, the Examiner recites this portion of Smith as meeting the limitation in claim 39. The undersigned can find no teaching in Smith that would meet claim 39. Reconsideration is requested.

Claims 64 and 67 are rejected as anticipated by Smith and the Examiner points to Smith at column 6, lines 1-49. Claim 64 depends from claim 1 and adds that the query includes a delimitator

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indicating a first portion of the query for which a relative order is preserved for one or more terms included in the first portion with the relative order being in accordance with a physical position of each term in the first portion with respect to any of the terms in the first portion. It is submitted that such a teaching does not appear in Smith. The same reasoning applies to claim 67.
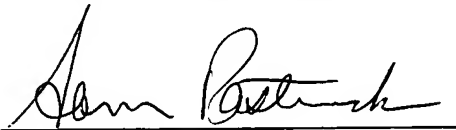
Claim 65 depends from claim 1 and recites that one of the at least partially unspecified terms includes a predefined character sequence representing a matching restriction that defines at least one of a syntactical criteria, a morphological criteria, and a criteria found in accordance with a determination by a computer program, and one or more matches for the query are determined in accordance with the matching restriction. It is submitted that Smith does not meet this limitation.

Independent claim 66 is similar in scope to claim 1 and is allowable for the reasons set forth above in conjunction with claim 1. Claim 68 depends from claim 66 and is therefore also allowable.

Claims 17 and 18 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Smith in view of Lee et al., U. S. publication number 2001/0044720. Claims 17 and 18 depend from claim 3 and therefore are allowable for the reasons set forth above in conjunction with claims 1 and 3.

For the above reasons, it is submitted that the pending claims are in condition for allowance and early favorable action is requested.

Respectfully submitted,
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